

## **ABSTRACT**

5 The invention discloses a MRAM (Magnetoresistive RAM) based on vertical current writing and  
its control method, the operation of information writing in the MRAM unit is completed by the  
corporate effect of the magnetic field generated by the current parallel to the MFC unit and the  
other current vertical to the MFC unit and passing through this unit. The advantage of such  
structure is: eliminating a word line (WL) of the prior art especially for information writing,  
10 reducing the number of the metal wiring layers and the contact holes, and reducing the  
complexity of MRAM's structure, and difficulty and cost of manufacturing process.

(Figure 2)